Appendix A2: Changes to claims (redline)(Version With Markings to Show Changes Made).

Please enter any new claims or changes reflected in Appendices A1 and A2.

REMARKS

Reconsideration of the rejections is respectfully requested.

The status of the claims is as follows:

Amended:	19-23
Pending:	1-23
Allowed:	1-18

The number of total claims and of independent claims remains the same as the amount for which fees were previously paid.

The claims have been amended to more clearly define the invention. Support for the amendments is either apparent, or is as described in the text below. Support for the amendment to claims 19-23 can be found, for example, at page 28, lines 13-30. No new matter is added.

The present Amendment is filed within two months of the mailing date of the Office Action, which Action has been made final. Accordingly, should the present Amendment fail to put the Application in condition for allowance, pursuant to MPEP 706.07(f) any extension period shall be measured from no earlier than the mailing date of an Advisory Action. In other words, Applicant respectfully submits that should an Advisory Action issue, then box "b)" should be marked (assuming the Advisory Action is on form PTOL-303 (REV. 5-89)).

Claim Rejections - 35 U.S.C. §112, Second Paragraph

Claim 20 stood rejected under 35 U.S.C. §112, second paragraph, based on an assertion that certain terms in the claim rendered the claims insufficient to particularly point out and distinctly claim the subject matter that the applicant regards as the invention.

Without conceding the correctness of the rejection, Applicants have elected to amend the claims to more particularly and distinctly claim the subject matter of the invention.

Reconsideration and withdrawal of the rejection under §112, second paragraph is respectfully requested.

Claim Rejections - 35 U.S.C. §102(b)

Claims 19-21 stand rejected under 35 U.S.C. §102(b), based on assertion that the claims were anticipated by Washabaugh et al. {Biochemistry (1988), 27(14), pages 5044-5053}and Yount et al. {J. Biol. Chem., Vol. 34, 1959, pages 738-741}.

Without conceding the correctness of the rejection, Applicants have elected to present the invention in different terms, which terms include amendment of claims 19-23. The claims as amended recite aspects of the invention that are not disclosed or suggested by the prior art of record. Accordingly, reconsideration of claims 19-23 is respectfully requested.

The Applicants respectfully submit that the Amendment meets the requirements of 37 CFR 1.116 since:

A. The Amendment complies with requirements of form expressly set forth in the Office Action by the amendments to claim 20.

B. The Amendment places the claims in condition for allowance or in better condition for consideration on appeal.

Accordingly, Applicants respectfully request entry of the Amendment.

In light of these amendments and remarks, it is respectfully submitted that the Amendment should be entered, the rejections should be withdrawn, and that the application is in condition for allowance.[2]

Respectfully submitted,

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[2] **Fee Deficiency**

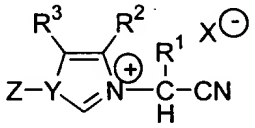
If any additional extension is required, please consider this paper a petition for such an extension; Any fee for the extension required for consideration of this paper but not enumerated above or in a transmittal or other associated paper can be charged to Account No. 04-0480.

AND/OR

If any additional fee is required for consideration of this paper, please charge Account No. 04-0480.

APPENDIX A2: CHANGES TO CLAIMS (REDLINE): VERSION WITH MARKINGS TO SHOW CHANGES MADE:

19. **(Once Amended)** A solid pharmaceutical [composition] dosage form comprising a therapeutically effective amount of one or more active compounds and a pharmaceutically acceptable excipient, the active compounds of the formula:



wherein :

Y is N or S;

Z is absent when Y is S and, if present, Z is an alkyl group of 1 to 7 carbon atoms, vinyl, allyl, arylcarbonyl, amino or alkoxycarbonylalkyl, or Z is according to the formula $-CH(R^4)(CN)$, or Z is $-CH_2C(=O)R^5$, where R^5 is (a) a C_6-C_{10} aryl group, said aryl group optionally substituted by one or more alkyl, alkoxy, halo, dialkylamino, hydroxy, nitro or C_1-C_2 alkylenedioxy groups or (b) heterocyclic group containing 4-10 ring members and 1-3 heteroatoms selected from the group consisting of oxygen, nitrogen and sulfur wherein the heterocyclic group is optionally substituted by one or more substituents selected from the group consisting of alkyl, oxo, alkoxycarbonylalkyl, aryl, and aralkyl group, and the one or more substituents are optionally substituted by one or more alkyl or alkoxy groups,

R^1 and R^4 are independently hydrogen, alkyl or phenyl optionally substituted with one or more halogen, alkyl, di(lower alkyl)amino or alkoxy groups; and

R^2 and R^3 are:

1. independently selected from hydrogen, acylamino, acyloxyalkyl, alkanoyl, alkanoylalkyl, alkenyl, alkoxy, alkoxycarbonyl, alkoxycarbonylalkyl, alkyl,

APPENDIX A2: CHANGES TO CLAIMS (REDLINE) – (continued)

alkylamino, (C_1-C_3)alkylenedioxy, allyl, amino, ω-alkylenesulfonic acid, carbamoyl, carboxy, carboxyalkyl, cycloalkyl, dialkylamino, halo, hydroxy, (C_2-C_6)hydroxyalkyl, mercapto, nitro, sulfamoyl, sulfonic acid, alkylsulfonyl, alkylsulfinyl, alkylthio, trifluoromethyl, azetidin-1-yl, morpholin-4-yl, thiomorpholin-4-yl, piperidin-1-yl, 4-[C_6 or C_{10}]arylpiperidin-1-yl, 4-[C_6 or C_{10}]arylpiperazin-1-yl, Ar {wherein, consistent with the rules of aromaticity, Ar is C_6 or C_{10} aryl or a 5- or 6-membered heteroaryl ring, wherein 6-membered heteroaryl ring contains one to three atoms of N, and the 5-membered heteroaryl ring contains from one to three atoms of N or one atom of O or S and zero to two atoms of N, each heteroaryl ring is optionally fused to a benzene, pyridine, pyrimidine, pyridazine, pyrazine, or (1,2,3)triazine (wherein the ring fusion is at a carbon-carbon double bond of Ar)}, Ar–alkyl, Ar-O, $ArSO_2$-, ArSO-, ArS-, $ArSO_2NH$-, ArNH, (N-Ar)(N-alkyl)N-, ArC(O)-, ArC(O)NH-, ArNH-C(O)-, and (N-Ar)(N-alkyl)N-C(O)-, or together R_1 and R_2 comprise methylenedioxy; or

2. together with their ring carbons form a C_6- or C_{10}- aromatic fused ring system; or
3. together with their ring carbons form a C_5-C_7 fused cycloalkyl ring having up to two double bonds including the fused double bond of the –olium or –onium containing ring, which cycloalkyl ring is optionally substituted by one or more of the group consisting of alkyl, alkoxycarbonyl, amino, aminocarbonyl, carboxy, fluoro, or oxo substituents; or
4. together with their ring carbons form a 5- or 6-membered heteroaryl ring, wherein the 6-membered heteroaryl ring contains one to three atoms of N, and the 5-membered heteroaryl ring contains from one to three atoms of N or one atom of O or S and zero to two atoms of N, each heteroaryl ring is optionally substituted with one or more 1-pyrrolidinyl-, 4-[C_6 or C_{10}]arylpiperazin-1-yl, 4-[C_6 or C_{10}]arylpiperidin-1-yl,

APPENDIX A2: CHANGES TO CLAIMS (REDLINE) – (continued)

azetidin-1-yl, morpholin-4-yl, thiomorpholin-4-yl, piperidin-1-yl, halo or (C_1-C_3)alkylenedioxy groups; or

5. together with their ring carbons form a five to eight membered heterocycle, wherein the heterocycle consists of ring atoms selected from the group consisting of carbon, nitrogen, and $S(O)_n$, where n=0,1, or 2; and

X^- is a biologically or pharmaceutically acceptable anion,

wherein aryl or Ar is optionally substituted with, in addition to any substitutions specifically noted, one or more substituents selected from the group consisting of acylamino, acyloxyalkyl, alkanoyl, alkanoylalkyl, alkenyl, alkoxy, alkoxycarbonyl, alkoxycarbonylalkyl, alkyl, alkylamino, (C_1-C_3)alkylenedioxy, alkylsulfonyl, alkylsulfinyl, ω-alkylenesulfonic acid, alkylthio, allyl, amino, ArC(O)-, ArC(O)NH-, ArO-, Ar-, Ar-alkyl-, carboxy, carboxyalkyl, cycloalkyl, dialkylamino, halo, trifluoromethyl, hydroxy, (C_2-C_6)hydroxyalkyl, mercapto, nitro, sulfamoyl, sulfonic acid, 1-pyrrolidinyl, 4-[C_6 or C_{10}]arylpiperazin-1-yl-, 4-[C_6 or C_{10}]arylpiperidin-1-yl, azetidin-1-yl, morpholin-4-yl, thiomorpholin-4-yl, and piperidin-1-yl; and

wherein heterocycles, except those of Ar, are optionally substituted with, in addition to any substitutions specifically noted, acylamino, alkanoyl, alkoxy, alkoxycarbonyl, alkoxycarbonylalkyl, alkyl, alkylamino, alkylsulfonyl, alkylsulfinyl, alkylthio, amino, ArC(O)-, ArO-, Ar-, carboxy, dialkylamino, fluoro, fluoroalkyl, difluoroalkyl, hydroxy, mercapto, sulfamoyl, or trifluoromethyl.

20. **(Once Amended)** The solid pharmaceutical dosage form [composition] of claim 19, [further comprising a pharmaceutically-acceptable carrier] wherein the solid dosage form is a tablet, capsule or lozenge.

APPENDIX A2: CHANGES TO CLAIMS (REDLINE) – (continued)

21. **(Once Amended)** The solid pharmaceutical dosage form [composition] of claim 19, comprising a therapeutically effective amount of one or more of the compounds wherein R^1 is hydrogen.

22 **(Once Amended)** The solid pharmaceutical dosage form [composition] of claim 19, comprising a therapeutically effective amount of one or more compounds wherein Z is an alkyl group of 1 to 7 carbon atoms.

23. **(Once Amended)** The solid pharmaceutical dosage form [composition] of claim 19, comprising a therapeutically effective amount of one or more compounds wherein Z is C_1 to C_3 alkyl.